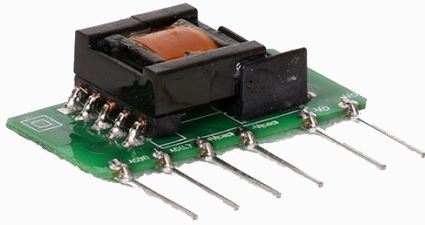




AMEOF5-BJZ



Open Frame SIP

The AMEOF5-BJZ is a compact open frame AC/DC converter that offers an ultra-wide input voltage range of 90-528VAC. This converter is part of Aimtec's wide input voltage range product family offered in 1, 2, 3, 5, 10 & 20 watts.

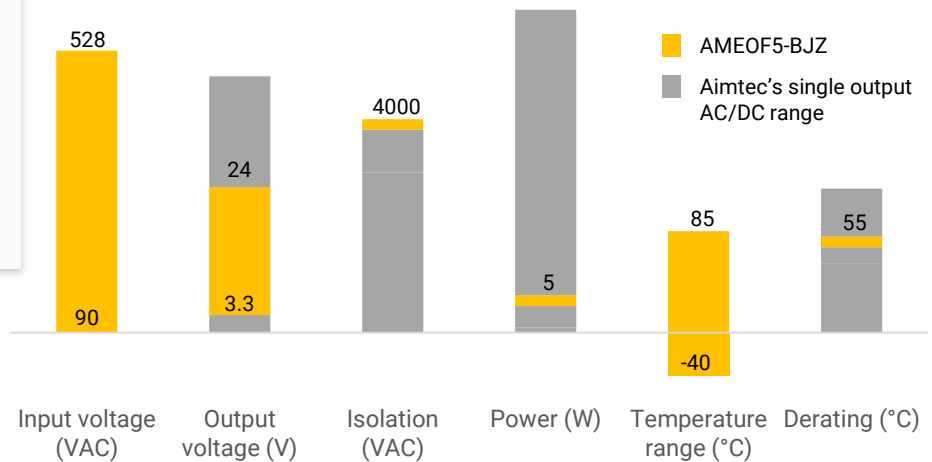
Aimtec's AMEOF5-BJZ features low power consumption, high efficiency & reliability, and 4000VAC isolation. It also meets the IEC/UL/EN62368 standards, which makes it suitable for many industrial applications such as controls and instrumentation. Furthermore, the ultra-wide input voltage range also makes this converter a perfect candidate for 3 phase applications.

Features

- Input: 90-528VAC, 100-745VDC
- I/O Isolation 4000VAC
- Continuous Short circuit protection
- Operating Temp: -40 to +85°C
- Low power consumption $\leq 0.5W$ at 528VAC
- Compact open frame SIP
- Over current protection
- Class II power supply

Summary

Situating the AMEOF5-BJZ among Aimtec's single output AC/DC converters



Training

AMEOF5-BJZ
Product Overview



Product Training Video
(click to open)



Press Release

RoHS Soldering profiles

Application Notes

Applications



Industrial



Automation



Test Equipment



3-Phase
Metering

Models & Specifications

Single Output							
Model	Input Voltage (VAC/Hz)	Input Voltage (VDC)	Full power temperature range (°C)	Output Voltage (V)	Output Current max (A)	Maximum capacitive Load (230VAC) (μF)	Efficiency 230VAC (%)
AMEOF5-3.3SBJZ	90-528/47-63	100-745	-20 to +55	3.3	850	2200	63
AMEOF5-5SBJZ	90-528/47-63	100-745	-20 to +55	5	850	1500	67
AMEOF5-9SBJZ	90-528/47-63	100-745	-20 to +55	9	560	680	70
AMEOF5-12SBJZ	90-528/47-63	100-745	-20 to +55	12	420	470	76
AMEOF5-15SBJZ	90-528/47-63	100-745	-20 to +55	15	340	330	76
AMEOF5-24SBJZ	90-528/47-63	100-745	-20 to +55	24	210	100	76
AMEOF5-3.3SLBJZ	90-528/47-63	100-745	-20 to +55	3.3	850	2200	63
AMEOF5-5SLBJZ	90-528/47-63	100-745	-20 to +55	5	850	1500	67
AMEOF5-9SLBJZ	90-528/47-63	100-745	-20 to +55	9	560	680	70
AMEOF5-12SLBJZ	90-528/47-63	100-745	-20 to +55	12	420	470	76
AMEOF5-15SLBJZ	90-528/47-63	100-745	-20 to +55	15	340	330	76
AMEOF5-24SLBJZ	90-528/47-63	100-745	-20 to +55	24	210	100	76

Input Specification				
Parameters	Conditions	Typical	Maximum	Units
Current	115VAC		200	mA
	230VAC		100	mA
	480VAC		70	mA
Inrush current <2ms	115VAC	10		A
	230VAC	17		A
	480VAC	28		A
External fuse	Recommended slow blow type	2		A
Input dissipation	No Load, 230VAC		0.3	W
	No Load, 528VAC		0.5	
Leakage current	230VAC/50Hz	0.25		mA

Output Specification				
Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy		±2		%
Line regulation	Full load, main input range	±1		%
Load regulation	0-100% load	±1		%
Minimum load	Single output	0		A
Ripple & Noise*	3.3,5,9,12V Output		150	mV p-p
	15,24V Output		250	mV p-p
	36V Output		360	mV p-p
	48V Output		480	mV p-p
Hold-up time	115VAC, 20MHz bandwidth	10		ms
* 20MHz bandwidth with a 0.1uF CC and a 10uF EC				

Isolation Specifications				
Parameters	Conditions	Typical	Rated	Units
Tested I/O voltage	60 sec		4000	VAC
Isolation Resistance		>1000		MΩ

General Specifications				
Parameters	Conditions	Typical	Maximum	Units
Switching frequency		70		KHz
Over current protection	Auto-recovery	120-400		% of I out
Short circuit protection	Hiccup, Continuous			
Short circuit restart	Auto-recovery			
Operating temperature	See derating curve	-40 to +85		°C
Storage temperature		-40 to +105		°C
Temperature coefficient		±0.15		% / °C
Cooling	Free air convection			
Humidity			85	% RH
Weight		7.5		g
Dimensions (L x H x W)	1.75 x 0.94 x 0.51 inches 44.5 x 24 x 13 mm			
MTBF	>300,000 hours (MIL-HDBK -217F, Ground Benign, t=+25°C)			
NOTE: All specifications in this datasheet are measured at an ambient temperature of 25°C, humidity<75%, nominal input voltage and at rated output load unless otherwise specified.				

Environmental Specifications

Vibration	Test mode	10-500Hz
	Acceleration	2G, 10min one cycle, every axis tested, 60min total duration

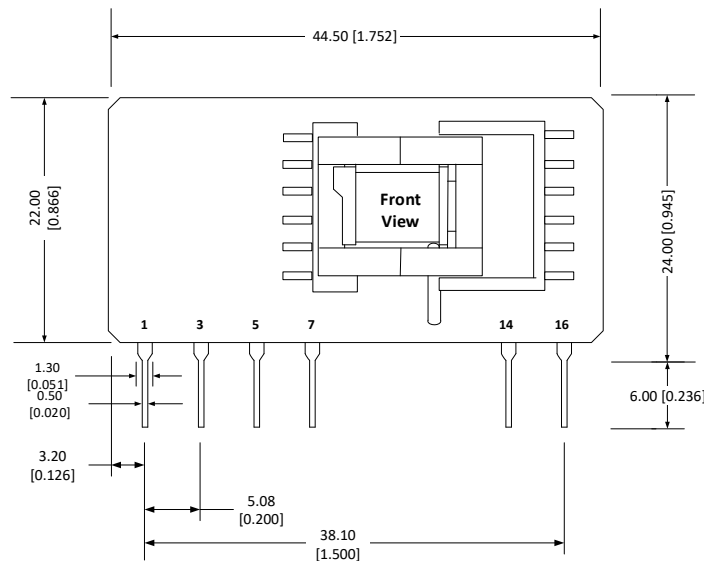
Safety Specifications

Standards	IEC/EN/UL62368 pending approval
	CISPR32/EN55032/FCC part 15, Class A & B, with external filter circuits, as referenced
	IEC 61000-4-2, Contact $\pm 4\text{KV}$, Criteria B
	IEC 61000-4-3, 10V/m, Criteria A, with Class B external filter, as referenced
	IEC 61000-4-4, $\pm 2\text{KV}/\pm 4\text{KV}$, Criteria B, with Class A/B external filter referenced
	IEC 61000-4-5, $\pm 1\text{KV}/\pm 2\text{KV}$, Criteria B, with Class A/B external filter referenced
	IEC 61000-4-6, 3Vrms, Criteria A, with Class B external filter, as referenced
	IEC 61000-4-11, 0-70%, Criteria B, with Class B external filter, as referenced

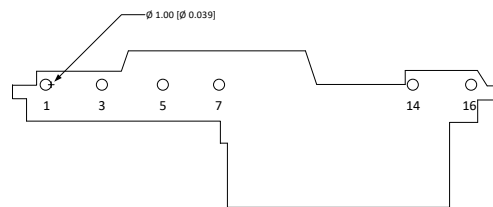
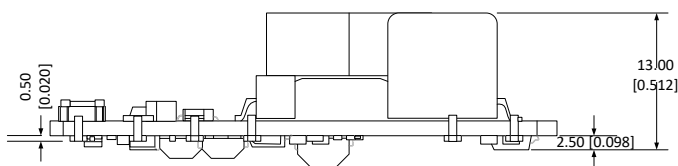
Dimensions

Pin Out Specifications

Pin	Single
1	AC N
3	AC L
5	+V sc
7	-V sc
14	-V Output
16	+V Output

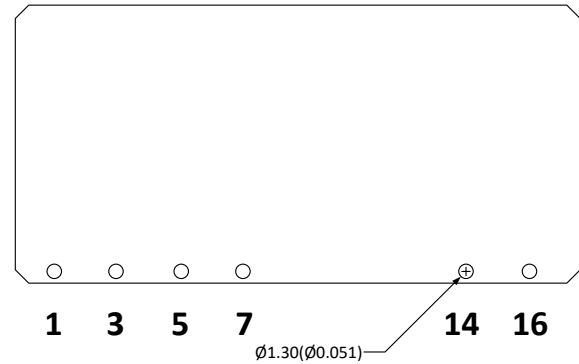
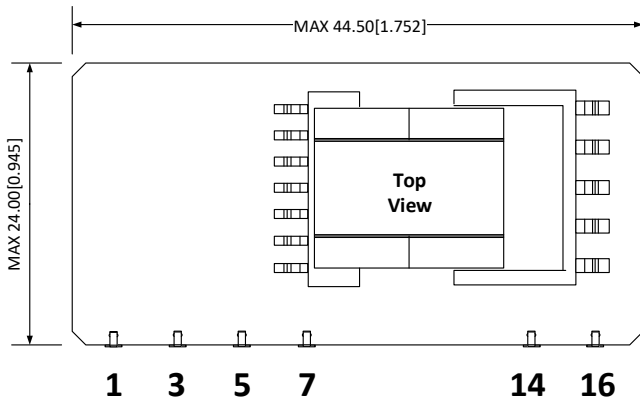


Bottom View

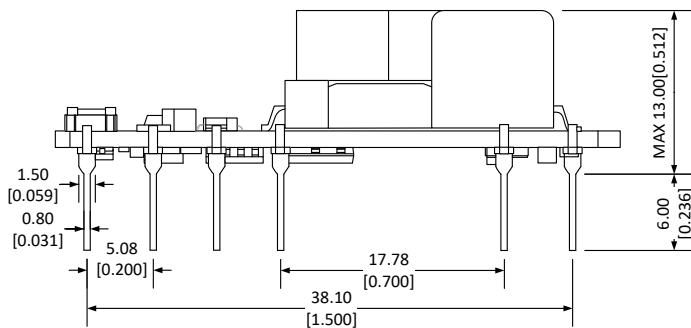


Note:
Unit: mm [inch]
Pin section tolerances: $\pm 0.10 [\pm 0.004]$
General tolerances: $\pm 0.50 [\pm 0.020]$

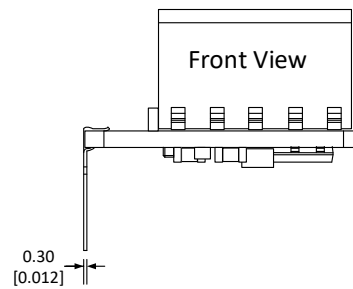
L Model Dimensions



Side View



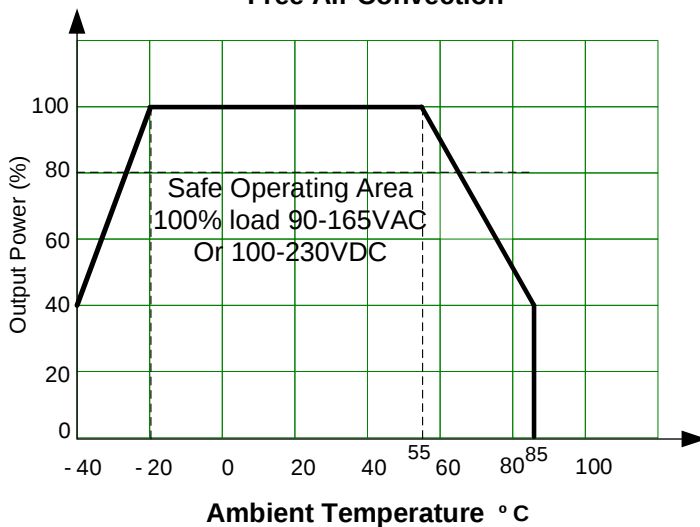
Front View



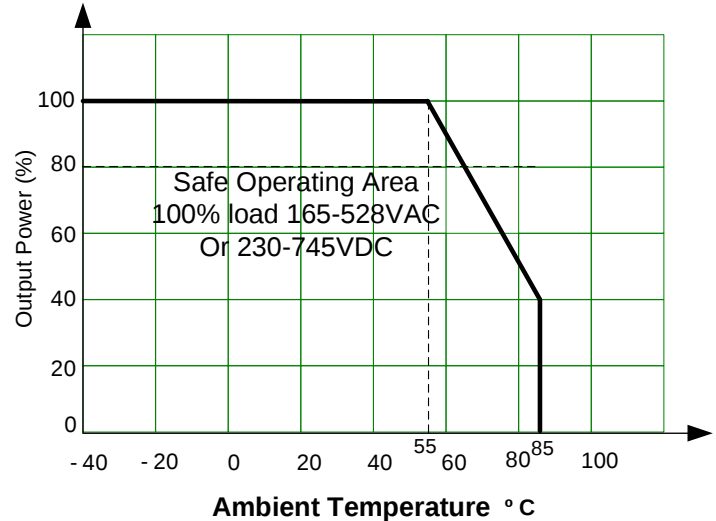
Note:
Unit: mm [inch]
Pin section tolerances: $\pm 0.10 [\pm 0.004]$
General tolerances: $\pm 0.50 [\pm 0.020]$

Derating

Free Air Convection



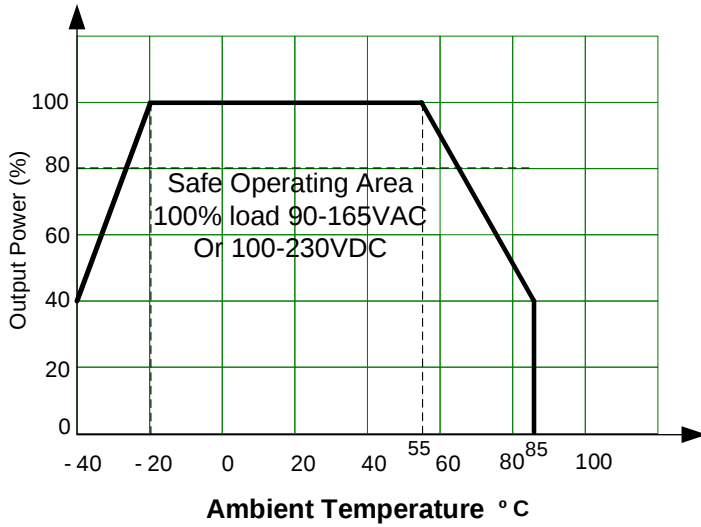
Free Air Convection



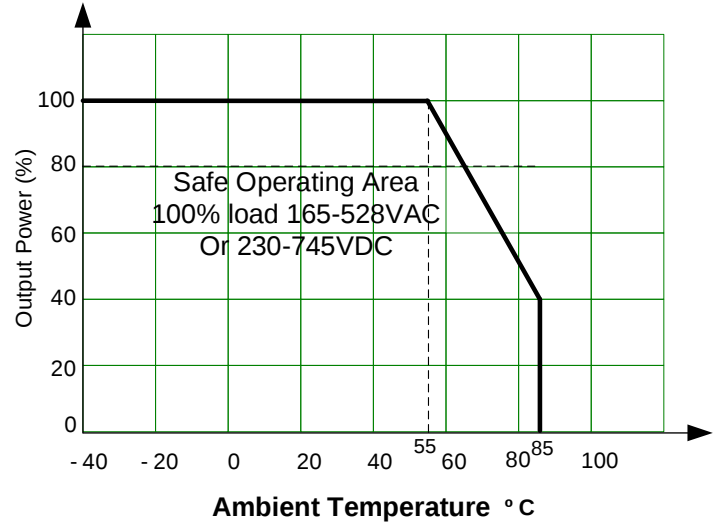
Derating



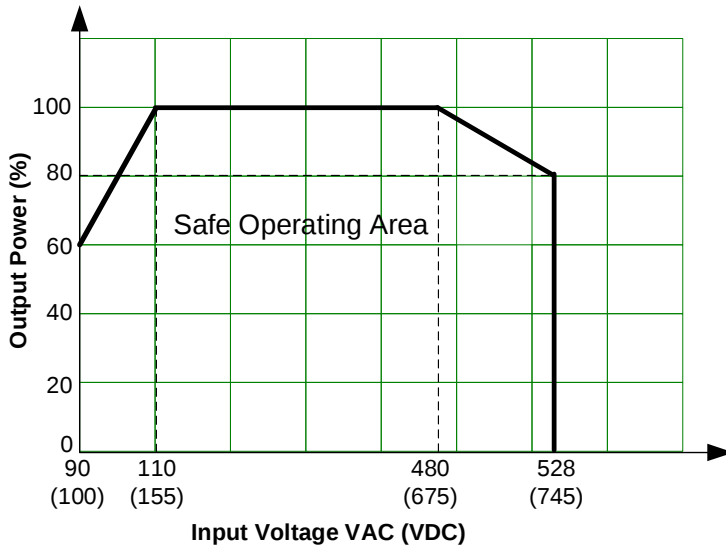
Free Air Convection



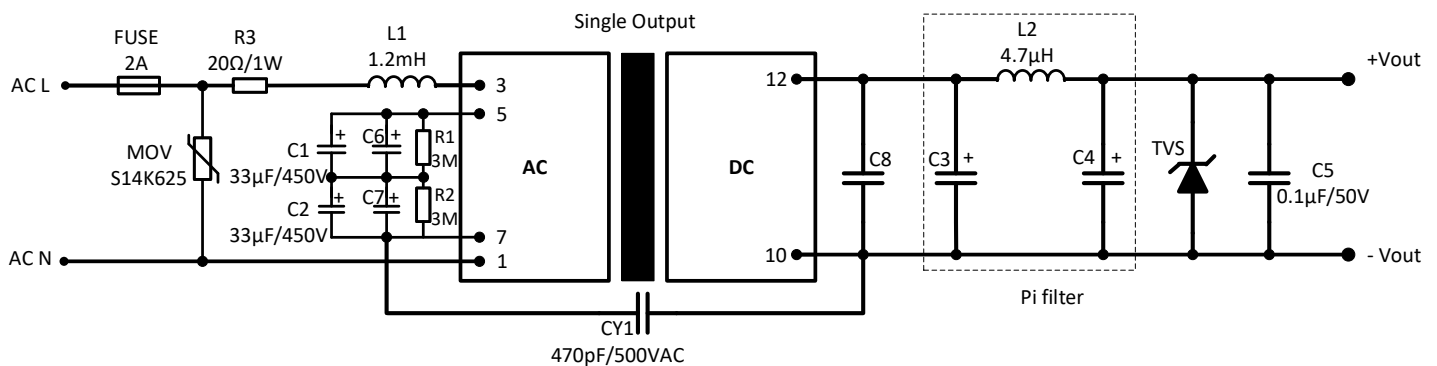
Free Air Convection



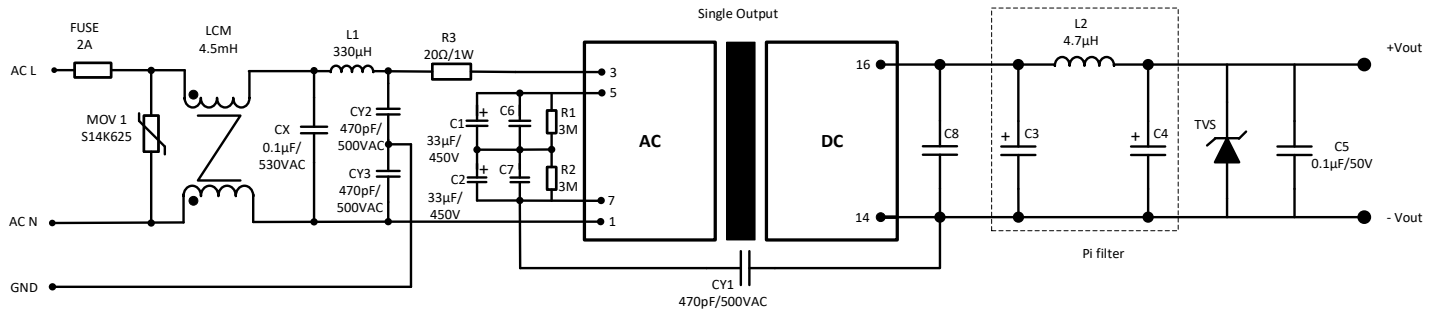
Free Air Convection at 25°C



Recommended EMC class A external circuit



Recommended EMC class B external circuit



Model	C6/C7	C8	C3	C4	TVS
3.3 Vout			470μF/16V (Solid Capacitor)	470μF/ 35V	7V
5 Vout					12V
9 Vout			270μF/16V (Solid Capacitor)	220μF/ 16V	20V
12 Vout			1000μF/35V	330μF/ 35V	
15 Vout	0.068μF/630V	10uF/25V	470μF/35V	470μF/ 35V	30V
24 Vout					

NOTE: 1. Datasheets are updated as needed and as such, specifications are subject to change without notice. Once printed or downloaded, datasheets are no longer controlled by Aimtec; refer to www.aimtec.com for the most current product specifications. 2. Product labels shown, including safety agency certifications on labels, may vary based on the date manufactured. 3. Mechanical drawings and specifications are for reference only. 4. All specifications are measured at an ambient temperature of 25°C, humidity<75%, nominal input voltage and at rated output load unless otherwise specified. 5. Aimtec may not have conducted destructive testing or chemical analysis on all internal components and chemicals at the time of publishing this document. CAS numbers and other limited information are considered proprietary and may not be available for release. 6. This product is not designed for use in critical life support systems, equipment used in hazardous environments, nuclear control systems or other such applications which necessitate specific safety and regulatory standards other the ones listed in this datasheet. 7. Warranty is in accordance with Aimtec's standard Terms of Sale available at www.aimtec.com.